

REMARKS

Claims 21-31 were amended in response to the Examiner's request to change the
"use" claims to "method" claims.

Wherefore, a favorable action is earnestly solicited.

Respectfully submitted,

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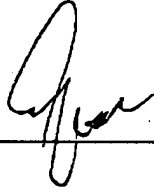
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MARKED-UP VERSION OF AMENDED CLAIMS

21. (Amended) A [use of] method of processing a hydrogen fuel into a simple fuel, comprising the steps of:

- a) providing a hydrogen fuel processor; and
- b) using a rare earth metal cobalt oxide having a perovskite crystal structure as a catalyst in [a] the hydrocarbon fuel processor [for processing a hydrocarbon fuel into a simple fuel].

22. (Amended) The [use] method according to claim 21, in which the catalyst further includes one of a noble metal and a noble metal oxide.

23. (Amended) The [use] method according to claim 21, in which the catalyst comprises a solid solution having the perovskite crystal structure of the rare earth metal cobalt oxide and an alkaline earth metal cobalt oxide.

24. (Amended) The [use] method according to claim 21, in which the rare earth metal is lanthanum.

25. (Amended) The [use] method according to claim 22, in which the one of the noble metal and noble metal oxide is one of ruthenium and ruthenium oxide.

26. (Amended) The [use] method according to claim 22, in which the one of the noble metal and noble metal oxide is one of platinum and platinum oxide.

27. (Amended) The [use] method according to claim 23, in which the alkaline earth is selected from a group consisting of calcium, strontium and barium.

28. (Amended) The [use] method according to claim 23, in which alkaline earth metal cobalt oxide is in a proportion up to 50% of the catalyst.

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29. (Amended) The [use] method according to claim 22, in which the one of the noble metal and noble metal oxide is included up to 2 mole% of the catalyst.

30. (Amended) The [use] method according to claim 21, in which the catalyst undergoes thermal decomposition such that its surface becomes coated with catalytically active lanthium oxide, hydrated lanthium oxide and cobalt metal particles.

31. (Amended) The [use] method according to claim 21, wherein the simple fuel is hydrogen.

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CLEAN VERSION OF AMENDED CLAIMS

21. A method of processing a hydrogen fuel into a simple fuel, comprising the steps of:
- a) providing a hydrogen fuel processor; and
 - b) using a rare earth metal cobalt oxide having a perovskite crystal structure as a catalyst in the hydrocarbon fuel processor.
22. The method according to claim 21, in which the catalyst further includes one of a noble metal and a noble metal oxide.
23. The method according to claim 21, in which the catalyst comprises a solid solution having the perovskite crystal structure of the rare earth metal cobalt oxide and an alkaline earth metal cobalt oxide.
24. The method according to claim 21, in which the rare earth metal is lanthanum.
25. The method according to claim 22, in which the one of the noble metal and noble metal oxide is one of ruthenium and ruthenium oxide.
26. The method according to claim 22, in which the one of the noble metal and noble metal oxide is one of platinum and platinum oxide.
27. The method according to claim 23, in which the alkaline earth is selected from a group consisting of calcium, strontium and barium.
28. The method according to claim 23, in which alkaline earth metal cobalt oxide is in a proportion up to 50% of the catalyst.
29. The method according to claim 22, in which the one of the noble metal and noble metal oxide is included up to 2 mole% of the catalyst.

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30. The method according to claim 21, in which the catalyst undergoes thermal decomposition such that its surface becomes coated with catalytically active lanthium oxide, hydrated lanthium oxide and cobalt metal particles.

31. The method according to claim 21, wherein the simple fuel is hydrogen.
